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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,048	03/08/2001	Chia-Lin Hsu	JC-6856-C	2769

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EXAMINER

RAO, SHRINIVAS H

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action****Application No.**

09/802,048

**Applicant(s)**

HSU ET AL.

**Examiner**

Steven H. Rao

**Art Unit**

2814

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 01 December 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 2 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.  
2. ☐ The proposed amendment(s) will not be entered because:  
(a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ they raise the issue of new matter (see Note below);  
(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.  
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.  
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_

Claim(s) objected to: \_\_\_\_\_

Claim(s) rejected: 1,3-17 and 21-23

Claim(s) withdrawn from consideration: \_\_\_\_\_

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.  
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.  
10. ☐ Other: See Continuation Sheet


rejection mailed on

Continuation of 10. Other: It is noted that Applicants' state claims 1 to 17 are presently pending, this is not correct. Claim 2 was cancelled by the Applicants' in their amendment filed on July 09, 2003 as also stated in the Final rejection mailed on September 29, 2003. Therefore claims 1, 3-17 and 21-22 are the only pending claims. Applicants' contend that the applied Farkas's second slurry containing ionic species" does not necessary mean they are oxidants of metal" is not persuasive because as previously (Final rejection) stated Farkas col. 8 lines 22 to 25 describes the use of any oxidant that oxidizes cooper, secondly Farkas in col. 8 lines 5-6 states "adequate selectivity of tantalum alloy to oxide and tantalum alloy to cooper was found in the second CMP step". Therefore metal/alloy oxide are present in the second slurry.

Applicants' contention that the examiner has not provided the basis in fact/ technical reasoning to support his conclusion that adjustment of zeta potential of the metal surface during the removal of the barrier layer is a functionally inherent step is also not true because the applied Penniman reference in col. 3 lines 26-37 describes " It can be seen from the foregoing that there is a requirement for a method and apparatus which allows substantially continuous and accurate monitoring of the Zeta potential of feed stock or furnish" and col. 1 lines 58-59 describes the effect and desirability of adjusting zeta potential in processes .The afore said in combination with previously set out reasons provide full and complete basis in fact and technical reasoning for the inherent functional limitation. Applicants' contention that" the feature of changing the zeta potential of the surface of the metal prevents the carbon rich particles from adhering on to the surface of the metal layer is unknown, and is thus not obvious" is also not persuasive because as shown above changing of the zeta potential is well known in the art. The function of the zeta potential preventing carbon-rich particles from adhering on to the surface of the metal layer cannot be given patentable weight because it not presently recited in any of the pending claims.

Therefore all of Applicants' arguments are not found persuasive and all the presently recited limitations of claims 1 and 11 are taught by the applied references. . Claims 2-10 (sic. 3-10), 21 and 12-17, 22-23 were alleged to be allowable because of their dependency on allegedly allowable claims 1 and 11, however as shown above claims 1 and 11 are not allowable and therefore claims 3-10,21 and 12-17, 22-23 are also not allowable. .

SK  
12/15/03

  
LONG PHAM  
PRIMARY EXAMINER